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Notice of Allowability

Application No.

10/813,204

Examiner

Mariceli Santiago

Applicant(s)

AHN ET AL.

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed March 15, 2005.
2. ☒ The allowed claim(s) is/are 62-96.
3. ☒ The drawings filed on 29 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Response to Amendment

The Amendment, filed on March 25, 2005, has been entered and acknowledged by the Examiner.

Cancellation of claims 1-61 has been entered.

Claims 62-96 are pending in the instant application.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the title, pursuant to MPEP 606.01 the title has been amended as follows,

--MANUFACTURING METHOD OF A FIELD EMISSION DISPLAY HAVING POROUS SILICON DIOXIDE INSULATING LAYER--.

Terminal Disclaimer

The terminal disclaimer filed on March 25, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,835,111 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Allowable Subject Matter

Claims 62-96 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

Regarding claim 62, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 62, and specifically comprising the limitation of forming a polycrystalline silicon layer on a substrate and a plurality of columns on the substrate, forming pores in the polycrystalline silicon layer to form a porous polycrystalline silicon layer, and oxidizing the porous polycrystalline silicon layer to provide a porous silicon dioxide layer.

Regarding claims 63-70, claims 63-70 are allowable for the reasons given in claim 62 because of their dependency status from claim 62.

Regarding claim 71, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 71, and specifically comprising the limitation of forming columns on a substrate, forming a silicon layer on the columns and the substrate, etching the silicon layer to form a porous silicon layer; oxidizing the porous silicon layer to form a porous silicon dioxide layer, planarizing the porous silicon dioxide layer.

Regarding claims 72-83, claims 72-83 are allowable for the reasons given in claim 71 because of their dependency status from claim 71.

Regarding claim 84, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 84, and specifically comprising the limitation of forming conductors on a substrate, forming a porous silicon dioxide layer on the conductors and on the substrate, planarizing the porous silicon dioxide layer, forming an extraction grid on the porous silicon dioxide layer, and etching openings through the porous silicon dioxide layer and the extraction grid.

Regarding claims 85-96, claims 85-96 are allowable for the reasons given in claim 84 because of their dependency status from claim 84.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Other Prior Art Cited

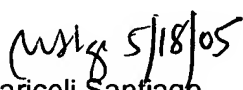
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (571) 272-2464. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mariceli Santiago
Primary Examiner
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